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PATENT CLAIMS

1. A microprocessor controlled toy building element (101, 501) comprising
- 5 a microprocessor (102, 507) which can execute instructions in the form of a program stored in a memory (117, 509);
- 10 a display (104, 508) integrated in the toy building element (101, 501);
- coupling means for coupling with building elements which can be moved by manoeuvring means, said manoeuvring means
- 15 being controllable in response to the instructions,
- c h a r a c t e r i z e d in that
- the display (104, 508) comprises a plurality of icons
- 20 (204, 205, 206, 207, 208) which each represent instructions for the microprocessor (102, 507), and which can be activated by a user for programming of the microprocessor, and by
- 25 signalling with a first one of the plurality of icons, said first icon representing instructions which the microprocessor is executing.
2. A microprocessor controlled toy building element according to claim 1, c h a r a c t e r i z e d in that a
- 30 first type of icons (204, 205, 206) is configured to illustrate patterns of movement.

3. A microprocessor controlled toy building element according to claim 1 or 2, characterized in that a second type of icons (207, 208) is configured to illustrate modifications of patterns of movement.

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4. A microprocessor controlled toy building element according to any one of claims 1-3, characterized in that the toy comprises means for generating a first set of instructions comprising parameters upon activation of a first type of icons (204, 205, 206), which instructions and/or parameters may be modified by activation of a second type of icons (207, 208).

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5. A microprocessor controlled toy building element according to any one of claims 1-4, characterized in that the microprocessor (102, 507) is adapted to receive signals from electrical and/or electronic units.

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6. A microprocessor controlled toy building element according to claim 5, characterized in that a first group of rules is conditioned by a first group of signals, and that a second group of rules (R1-R6) is conditioned by a second group of signals.

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7. A microprocessor controlled toy building element according to any one of claims 1-7, characterized in that instructions corresponding to one icon implement one rule by controlling the manoeuvring means in response to signals from electrical and/or electronic units.

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8. A microprocessor controlled toy building element according to any one of claims 1-7, characterized in

- i z e d in that the microprocessor executes rules (R1-
R6) in the form of instructions which control units,
said rules being conditioned by a plurality of signals,
5 said rules being arranged in an at least partly priori-
tized order,
said prioritized order indicating which one of several
10 rules is to be allowed to control a unit,
said order being arranged according to the signals by
which they are conditioned.
- 15 9. A microprocessor controlled toy building element ac-
cording to any one of claims 1-8, c h a r a c t e r -
i z e d in that the toy comprises keys (113, 114, 115)
integrated in the toy, said keys being capable of acti-
vating the icons.
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10. A microprocessor controlled toy building element ac-
cording to any one of claims 1-9, c h a r a c t e r -
i z e d in that the toy comprises communications means
(505, 504) for receiving commands which can be converted
25 into a program that can be executed by the microproces-
sor.
11. A microprocessor controlled toy building element ac-
cording to any one of claims 1-10, c h a r a c t e r -
30 i z e d in that the toy comprises communications means
for transmission (505, 504) of commands.
12. A microprocessor controlled toy building element ac-
cording to any one of claims 1-11, c h a r a c t e r -

i z e d in that the toy comprises communications means (54) for transferring information via a light guide (503).

5 14. A microprocessor controlled toy building element according to any one of claims 1-13, c h a r a c t e r -
i z e d in that the toy comprises an elongated light
guide (503), through which visible light may be transmit-
ted in its longitudinal direction, said light guide being
10 adapted to allow part of the light transmitted to escape
through its sides.

15 15. A toy building set according to any one of claims 1-
14, c h a r a c t e r i z e d by comprising toy build-
ing elements with coupling means for mutual coupling.